User Manual

(TLT-2H GPS/GSM Motorcycle Tracker)

1. Introduction

The TLT-2H GPS/GSM Tracker is a Vehicle Positioning Device what based on GPS and GSM/GPRS technology . It's can transmit the Longitude and Latitude coordinates to your Mobile Phone by SMS. And you can find the detail location of this unit on the Google Map or other Map Software. Also The tracker can upload the positioning data to the server.through GPRS . So The user can look for Real-Time Location-Tracking, Historical Tracking through the Internet.

The GPS and GSM Antenna is internal of this unit. So it's very easy to installation. And It's can use for Car, Truck, Motorcycle ,Bicycle etc...

Before you use this unit, please spend some time to read the User Manual to know the operation way.

2.Features

1. Support GSM 850/900/1800/1900 MHz. Works worldwide!
2. High sensitivity, JRC low power GPS chipset!
3. Excellent for fixing the position even at a weak signal status, work well even in areas with limited sky view like urban canyons
4. Fast Signal Acquisition
5. Support single location and continuous tracking
6. Support alarm, have 3 preset phone number
7. Support check location and real-time and historical trajectory by SMS or Internet
8. SOS button send out exact location for immediate rescue/action.
9. Support cut-off electricity and oil function and recovery command
10. High reliability circuit design, in line with the automotive electronics industry standards

3. TLT-2H Picture

3.1. Specification

GSM module	MTK Case, support 900/1800(850/1900 can option) Support the TCP protocol
GPS Chipset	JRC chipset
GPS sensitivity	-164dB
C/A Code	1.023MHz chip rate
Channels	210 channel all-in-view tracking
GPS frequency	L1,1575.42MHz
GPS Position Accuracy	2.5 meters, CEP
GSM Position Accuracy	Later will realize
Velocity Accuracy	0.1m/s
Time Accuracy	Synchronized to GPS time
Cold Start	35sec.,average
Hot Start	1sec.,average
Warm Start	30sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g

3.2. Others

Operating temperature	-20°C－65°C

Humidity	5%To 95% Non-condensing
Dimension	88mm×46mm×18mm
Voltage	12-24V
Average Current When stand-by	<84mA
LED	Green/ Blue/ Red LED showing GPS、GSM and power status
Out set SOS Key	One SOS emergency key: for urgent call

3.3. LED State Description

Blue LED--- indicate the GSM signal state

State	Means
constant Lighting	no SIM card or not GSM net
flashlight once interval 8s	GSM receiver work well and standby
flash quickly	voice calls or in GSM connection

Red LED---indicate charge sate

State	Means
constant Lighting	charging
No light	charging was completed

Green LED--- indicate the GPS signal state

State	Means
No Lighting	Working, but no location
Flashing	Working and has located

4. Products Appendix

1）TLT-2H GPS/GSM Vehicle Tracker

2）Power cable

3）Battery

4） User Manual(CD ROM)

5） SOS Button

5. Install SIM Card

1 Select SIM card

2.You can use GSM card from Local Mobile.

3. Make sure enough money in the SIM card, and support SMS/GPRS function.

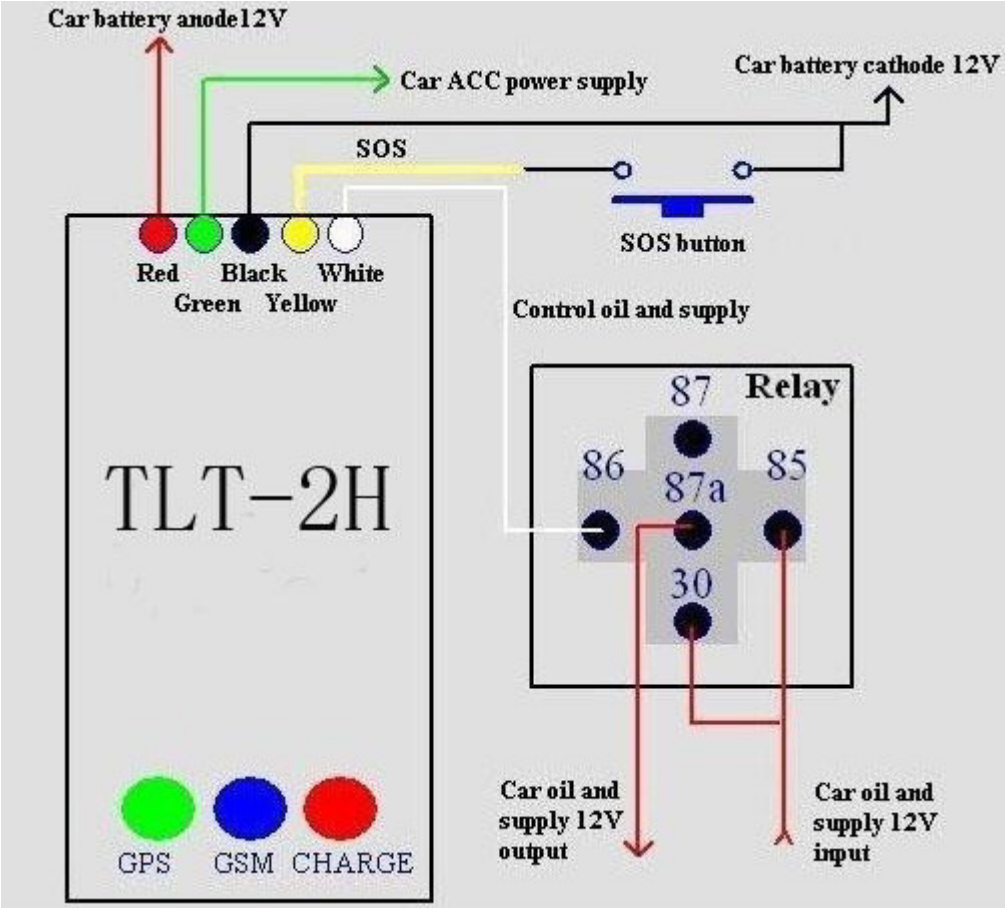
4. Draw out the rear cover, there is a slot for SIM card. Then push the card into the slot until it fully inlays, and ensure that it locks well.

6. Installation Diagrame

The external 5 wires of TLT-2H GPS/GSM tracker are as follows. Red for the 12V car power wire, connect to the car battery anode; Black for the earth GND, connect to the car battery cathode; Yellow for the SOS for help Control wire, connect external SOS switch button to car battery cathode; Green wire connect ACC car power supply, that is, with the car CD, radio, and other automotive electrical appliances in parallel. When the vehicle key puts in the ACC gear, the green line will examine the 12v voltage, the terminal will open the charge function automatically. White for cut-off oil and power control wire, connect to the relay coil 86, i.e. one end. Relay 85, i.e. anther end connects to oil and power supply 12V. 30, 87a are normal closed-end, series in the oil and power supply circuit. Please note that if the installation of lead wire is right, if errors installation led to the equipment damage, At Own Risk, the company is not responsible for it.

7. Application

After you see the brief introduction of this unit, now please see the detail operation of this unit:



First Step, be the host of the unit, only the pre-saved number can receive the alarm message from the unit.but any number can send command to the unit to change the configuration of teh unit. Command as follows:

1. Change the telephone number in advance instructions

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When TLT-2H tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

The Work Mode of TLT-2H

TLT-2H have two work mode---SMS and GPRS Mode. If the users only need track the car by mobile phone, and check the position (latitude and longtitude) in Google Map, or control the oil and power by mobile phone, SMS Mode is enough. If the users want to track the car by real-time and also want to check the History Record, the users can choose GPRS Mode.

SMS Work Mode：

Format：700+ user password (4 figures)

eg: 7000000

Explanation：When TLT-2H tracker receives the SMS and confirms the user password correctly, it switches to the SMS application mode. After the success, it will send the confirmation messages (SET MODE OK, CURRENT MODE: SMS P2P) to the sender.

GPRS Work Mode：

Format：710+ user password (4 figures)

eg：7100000

Explanation: When TLT-2H tracker receives the SMS and confirms the user password correctly, it switches to the GPRS application mode. After the success, it will send the confirmation messages (SET MODE OK，CURRENT MODE：GPRS) to the sender.

Generally Application of SMS Mode

1.1 Single localization request instruction

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

eg: ERROR GPS GPRMC FRAME DATA

BS: 27971054”

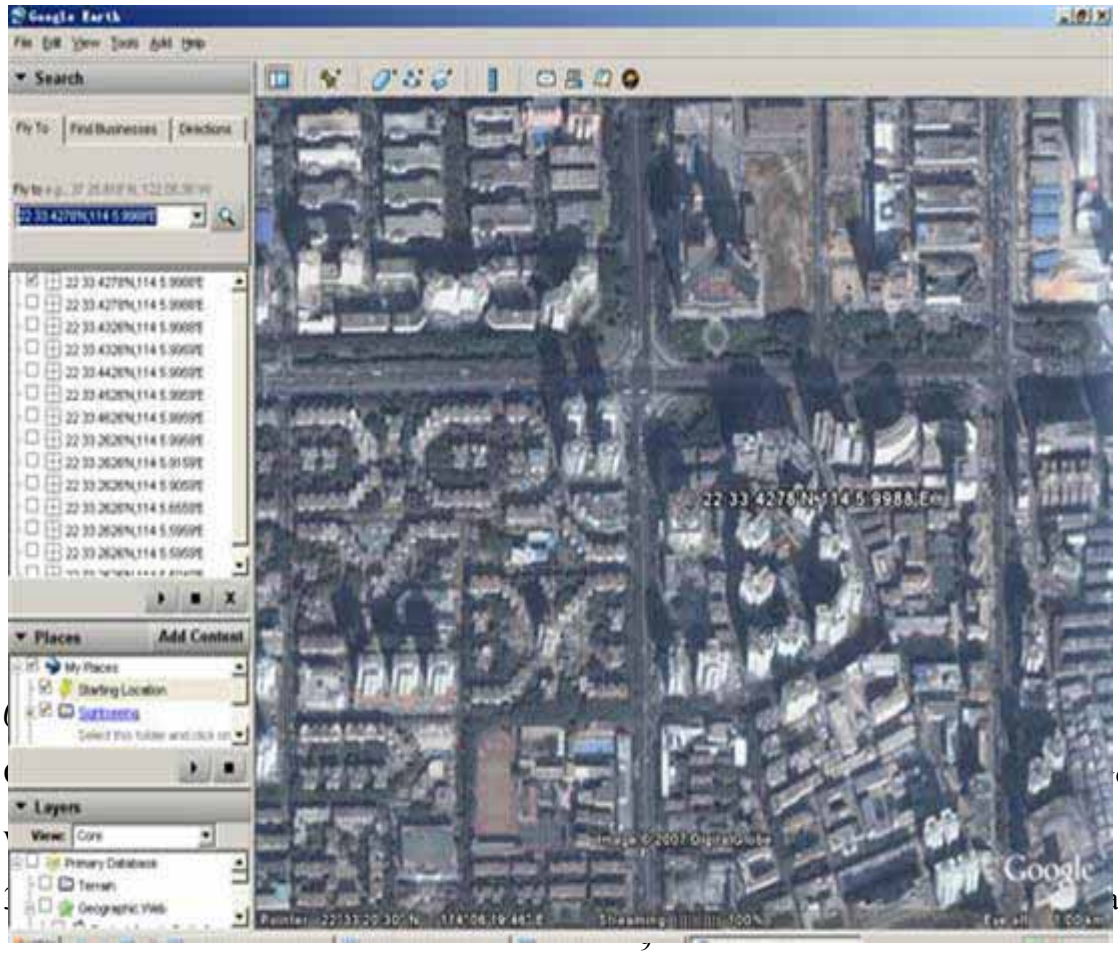
ID: 353686009002030

STATE: SMS

Display the location on map

1) Download Google earth software from http://earth.google.com

2) Start the Google earth software. (For more information about Google earth software, please refer tohttp://earth.google.com)



oogle map

nd code to the

GPS tracker TLT-2H . Input the latitude and longitude that you receive from SMS and click on search button, the Google earth will display the location map for you.

eg： You receive the information from the tracker. As follows:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

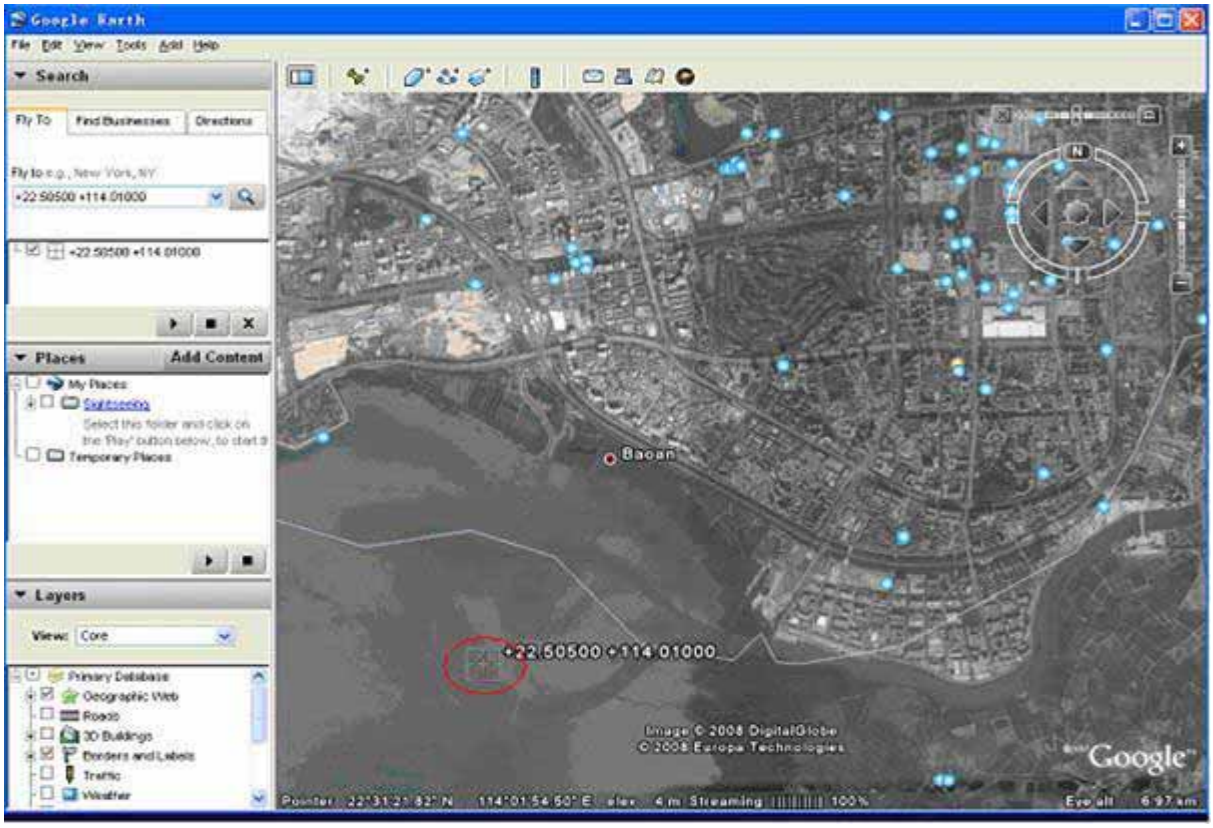
ID: 353686009002030

STATE: SMS

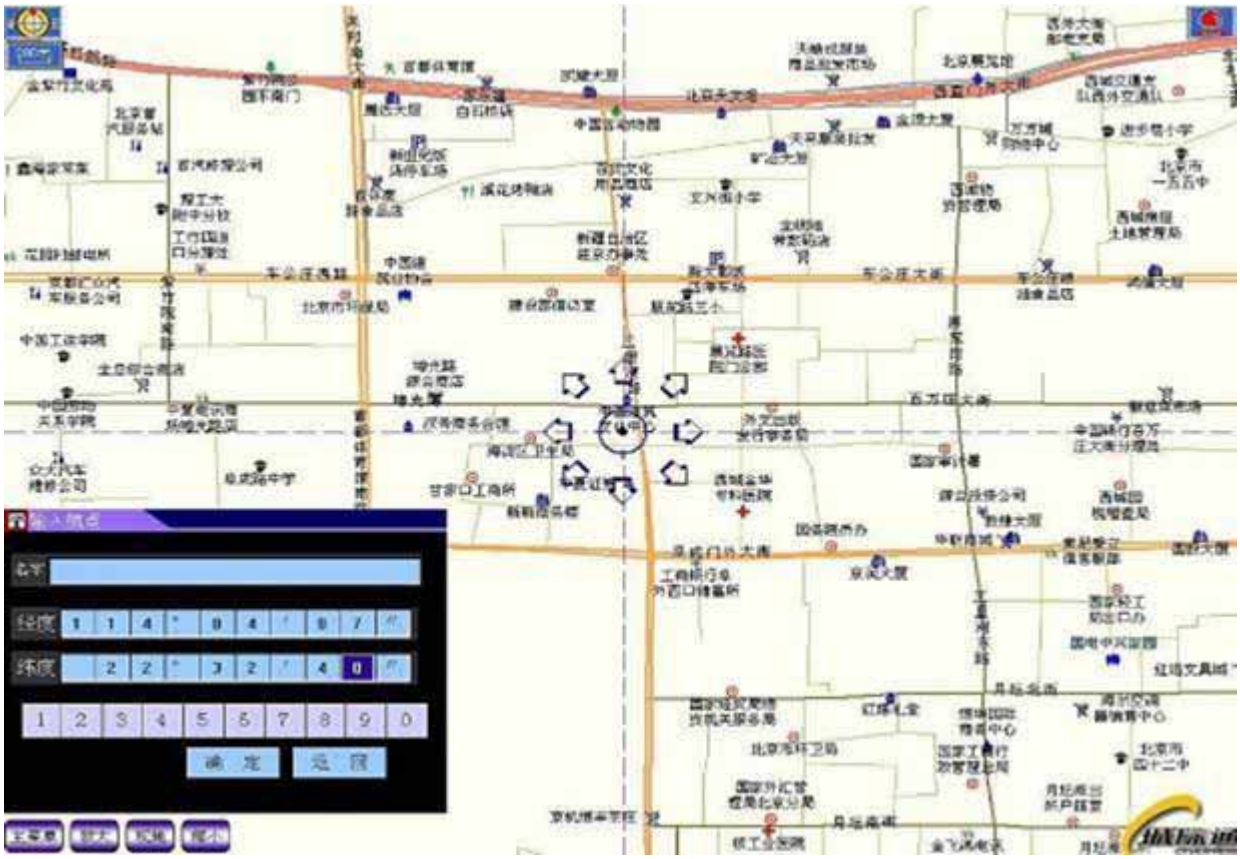
Search the position on the Google map, in relevant position input：

+22.50500 +114.01000

Obtain the following picture:



Or you can use local map software on PDA or car navigation device, input the position date. (*Note:* pay attention to change the position date format)



2. Cut-off electricity and oil function

1. Open the cut-off electricity and oil function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

c, Directly Command : 940+ user Password

Note : 940=900+910 , the unit will implement this command at once after receive this command.

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white wire will output low level in order to control the outside relay to cut off oil and electricity. After completion, send confirmation message "POWER OFF OK" to the user.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white wire will output high level in order to control the outside relay to recovery oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

c, Recovery Command instant

941+user Password

Note : 941=902+903 the unit will implement this command at once after receive this command.

Attention: this function is certain risk, it's will happen traffic in the freeway if you send this command, so please consider again and again.

The Advanced Application and Configuration of SMS Mode

3. Set up the user password instruction

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When TLT-2H tracker receives the SMS and confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

4. GPS state setting instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

5. Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

6. Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

7. Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

8. Send the positional information in fixed time instruction

Format: 4 xx + user password (4 figures)

eg: 4010000

Explanation: x indicates one figure from 0 to 9, while “xx <60”, its unit is minute. while “xx >60”, its numerical value is “xx minus 60” and unit is hour, in other words, 61 is 1 hour, 62 is 2 hours, followed by analogy. When TLT-2H tracker receives the instruction and confirms the user password correctly, it establishes the current time for initial timing time, xx is the gap time, and sends the confirmation SMS to the sender’s mobile phone (TIMER START, REPEAT INTERVAL :< X>MINUTES). Then start to time and send the format as 1.1 setting information when it arrives the gap time, the information state item automatically updates STATE: TIMER. When “xx=00”, cancels the positional information in fixed time instruction, and sends the confirmation SMS to the sender’s mobile phone “TIMER STOP”.

Attention : the interval time can't above 2hours of this version at the moment, if you need long interval time, please contact us, so we can design this for you .

9. Calling switch instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When TLT-2H tracker receives the instruction to close calling and confirms the user password correctly, close the calling function (including the SOS, alarm when across the fence, and alarm when cut off power), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When TLT-2H receives instruction to open calling and confirm the user password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: ON" to the sender.

10. Telephone localization function

Explanation: One of 3 telephone numbers stored in advance calls in, and hangs up after ringing 2-5 times, then the TLT-2H will send the location information to this number such as 4.1.6 to this number, the information state item automatically updates STATE: CALL. But other incoming numbers will automatically hang up.

11. Seeking help initiatively

When press the key more than 3 seconds, it will send the location information such as 4.1.6 to 3 telephone numbers stored in advance, the information state item automatically updates STATE: SOS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn.

Note: If the "Calling State" function is off, it will not call the user telephone number, and only send messages to the present number.

12. Alarm when cut off power function

1. Open command o: 011 + user password

eg: 0110000

2. Close command: 010+user password

eg: 0100000

Description: When the TLT-2H receive the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information

"DEFENCE ON", into the armament state after 10 seconds. When the main external power supply was illegally cut off, the TLT-2H will automatically send the current location information format as 4.1.6 to the 3 preset numbers, STATE items for: DEF. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn. When the TLT-2H receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF", repeal disarmament. TLT-2H is no longer monitor the illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the preset number.

13. Electronic Fence Function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the TLT-2H beyond the scope of the set fence, it will send location information as to 4.1.6 to the 3 preset numbers. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the TLT-2H re-enters the fenced area, it will immediately send location information format 4.1.6 to the three preset numbers. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose

corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages "SET GEO-FENCE OK" to the sender.

Format2：004+ user password E/Wddd.ddddd N/Sdd.ddddd Rzzz.z

eg：0040000E114.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages "SET GEO-FENCE OK" to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

Format 3 : 005+User Password Rzzz.z

eg: 0050000R0.1

Note : When this unit receive this command and confirm the password is right. And read the Update gps data whether is available. If ok, take the lat/log to the coordination, and the R for The Radius, and also pen the Geofence at the same time. If the configuration is ok. The unit Will send "set geo fence ok " to the sender. If the update GPS Data void, the unit will give up and then red the next one, if the unit can't receive the data above 50sec, the unit will send A message to the sender which is "ERROR GPS DATA, TRY AGAIN LATER"

After set ok, the unit will come back the original state.

2) open the electronic fence: 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

3) close the electronic fence: 210 + user password"ERROR GPS DATA, TRY AGAIN LATER"

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

Attention :

User can choose one of three way to set the Geo- fence . The unit will open this function after receive the command, the last operation is available when close this function then open it again.

14. Overspeed Alarm Function

Format:#122#Password#X##

Eg: #122#0000#250##

Note : X is mean reference value, and the unit is mail/hours(KM/H), the area is (0,999), when the unit receive this command and confirm the password is correct, Then implement this command. X=250 is mean that when the speed of the car is Above 250KM/H, the unit will send a message to the threes users ,the format is like 1.1 and the state is "OVER SPEED". At this time, if the speed of the car is lower as 250KM/H, then the unit will send a message to the send which the state is "SAFE SPEED"

When you set the X==0, and at this time, the unit will close this function, when you set the X≠0,

open this function, and then send a message to the sender which is "SET RATE LIMIT:X"

15. Upload the history data

Record the history data:
If you want to use this function in SMS Mode, you need to change the mode in GPRS and set the IP, APN, the detail way you can see the manual.
1, configuration
Format : #807#user password #X##
Note: X is frequency, the area is (0,999), the unit is "second". When the unit receive this command and confirm the password is right. And set the history frequency is X. When the X=0, that's close the function. If X=30, that's mean that the unit will save the data every 30se, if the command is ok, then send "SET SAMPLEING OK" to the unit.
1, the memory of every data is 100B
2, the memory of the unit for the history is 864KB. For example, if you set the X=30, it's about can save the data of three days . If X=300, it's about can save the data of thirty days. When the data is above 864KB,the next new data will cover the oldest data.
3, if the air sensor is open and also the unit is not move for a long time, the history record will close and the unit will open once the unit is moving again.

2, Upload the history data
A: upload the history data of 24h
Format : #808#user password #24##
When the unit receive this command and confirm the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like 1.1 .the state is "STORAGE"

16. Low voltage warning

When the TLT-2H ’s working voltage lower than the set, to read the GPS information, whether or not effective, immediately send the format as 4.1.6 location information to the three stored numbers, the information state item automatically updates STATE: LP. Send a total of three times, each time one minute interval.

17. ACC detect charge function

1) For Charge

Description: TLT-2H check the state of ACC of the power through the ACC Cable,so the ACC ON when the car is moving, and the power of the car will recharge to the unit. and the ACC Off when the car is parking, and the power of the car will not recharge to the unit.

2) The On/Off Command for ACC State

Open Command of ACC State : 091+ Password
Eg :0910000
Close Command of ACC State : 090+ Password
Eg:0900000
Note: when TLT-2H receive the 091 command, and confirm the password is correct.TLT-2H will

send a message to the sender what the content is "ACC STATE PROMPT:ON". when ACC is ON/OFF，the TLT-2H will send the current position to the pre-saved numbers whether the GPS Data is avaible or valid, and the state will display “AUTO START/AUTO STOP”be the ACC State.

when TLT-2H receive the 090 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:OFF". when ACC is ON/OFF，the TLT-2H will not send any message whatever the unit is GPRS Or SMS Mode .

Attention : the default is ON, and once the configuration is ok whatever the unit is ON/OFF, the unit will not change until receve the next command or reset command

18. ACC Checking and Alarm for Moving

Alarm Command for Moving :008+Password+Rzzz.z

Close Alarm Command for Moving : 009+Password

Note: when TLT-2H receive 008 command, and confirm the password is correct,put Rzzz.z for the radius of area. the zone of zzz.z is 【0.1～999.9】, the unit is KM. after configuration is ok, TLT-2H will send "SET MOVE RADIUS OK"to the sender.

After configuration of the alarm for moving is complete, if TLT-2H checking the ACC State is changed which from ACC ON to ACC OFF, after three minutes, the TLT-2H will take the current position for the coordiration point, the unit will open the defence(use the zzz.z) whether the GPS Data is Available or Valid .

when the ACC is OFF, if TLT-2H checking the car over the defence,in the SMS Mode, the TLT-2H will send a message to the pre-saved numbers what the state is "STATE:ACC OS" (the unit will send the current position to the server,the state is "ACC OS",and call the pre-saved numers, the 150/151 comamnd will affect the unit that whether call the pre-saved numbers. if you reset the unit, the unit will only send message and don't call numbers) ,once the car coming the defence, the unit will send current position information to the server or send message and call the pre-saved numbers, and the state is "ACC RS"

Once TLT-2H checking the ACC state is close(from Open to Close), the Alarm for Moving will close automatically, when the ACC state is open(from Close to open), the Alarm for Moving will open automatically

When TLT-2H receive 009 Command and confirm the password is correct, the Alarm for Moving is closed automatically whatever ACC State is open or close unless send 008 command again. after you set 009 command, the utni will send "MOVE DEFENGCE:OFF" to the sender.

Attention : the Alarm for Moving of default is open, and the area is 500M

19. Updata on the Air

1). Formate : !-Password

Eg: !-0000

Note: when TLT-2H receive this command and confirm the password is correct, the unit will restart and enter FTP Server to download procedure automatically.after succesful, the unit will restart again, and it's ok.

2) Formate : !-Password,FTP Address, User Name, Password

Eg: !-0000, igarin.gicp.net,auto,123

Note: when TLT-2H receive this command and confirm the password is correct, the unit will restart and enter FTP Server to download procedure automatically.after succesful, the unit will restart again, and it's ok.

Attention : the area of FTP Address is 【5，35】, and also can use domain, and made is for characters,numbers,. _（_） (-) . the user name is for FTP, the area is 【3，20】, the password is FTP'S password, the area is 【3，20】.

GPRS Work Mode

The way of change mode please check the instruction. In GPRS Mode, can save three numbers(1.2.3) and a password (4 digits) , a group TCPIP IP and Port, a GPRS Service Password, a APN Number. The configuration command is not effect whether the unit is open or close until the unit receive the new command.

1. Three steps to send the GPS Position of unit to Platform

1 .Set up the access point name of GPRS

1 Format1：#803#user password#APN##

eg：#803#0000#CMNET##

Format2：#803#user password#APN#APN user name#APN password ##

Explanation1: Different GSM / GPRS service associations provide different APN, please according to local service providers to provide the APN to choose format 1 or 2 to use set.

Explanation2: When TLT-2H tracker receives the instruction and confirms the user password correctly, updates the access point name to the new access point name. After the success, it will send the confirmation messages to the sender. If sent the format 1, the content is “SET GPRS APN OK”;

if it is format 2, the content is “SET GPRS ACCOUNT OK”.

Note: APN is CMNET after factory set or reset. APN is characters composed of 3 to 35 letters, numbers, dots (.) underscore (_) and connectors (-). APN user name and user password are respectively characters composed of from 3 to 20 the numbers and letters.

2. Set up the TCP/IP server and IP’s address and port number

Format：#804#user password#fixed IP address # port ##

eg：#804#0000#222.125.12.32#80##

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, updates the IP address and port number preserved in the module，After the success, it will send the confirmation messages to the sender. The content is “SET SERVER IP AND PORT OK”

3．Upload Data Settings Automatically

There are two mode about Upload Data Automatically. One is "Car Moving Tracking Mode". Another is "Car Stop Tracking Mode". Both of this two mode is change automatically due to the ACC State . The ACC is open and it's "Car Moving Tracking Mode". The ACC is close and it's "Car Stop Tracking Mode" . The two mode is different according the configuration GPS interval time and upload number of data, so can display the detail Real-Time Trail when the state is "Car Moving Tracking Mode" and upload the data sparseness when the state is "Car Stop Tracking Mode" so can save the SIM Card Fee and also can keep the tracing effect. When the Upload Data Setting is change, the unit will send the data from the memory automatically, and then follow the mode.

3.1 Car Moving Tracking Mode

Format：#805#user password# sampling interval T # the number of upload data each time N ##

eg：#805#0000#10#1##

Explanation: The time T unit of the sampling is second, 10 seconds at least，59999 seconds at most；The number of upload data each time is N, at least is 1, at most is 50.

When TLT-2H receive the command, and confirm the password is correct, then TLT-2H will send a feedback message to the sender what is SET GPS SAMPLING TIME AND QUANTITY OK . also will implement this command, then the unit will get the GPRMC data and save in the memory. and send the GPRMC Data to the server.if the data can't send it to the server by other excuse like GSM Signal or Bad Internet, the data will save it automatically, and when the internet is ok, the unit will send the data again,and the state is AUTO. when users set the numberof data is 0, the unti will close this function,and the unit will send message to the sender what is "GPRS TIMER STOP"

3.2.Car Stop Tracking Mode

Format : #809#user password#X#Y

Explanation: The time X unit of the sampling is second, 10 seconds at least，59999 seconds at

most；The number of upload data each time is Y, at least is 1, at most is 50. Sampling interval T and the number of upload data each time N product should meet greater-than-equal 60, that is T*N≥60.

When TLT-2H receive the command, and confirm the password is correct, then TLT-2H will send a feedback message to the sender what is "GPRS REPORT SAMPLING 2 OK " . also will implement this command, then the unit will get the GPRMC data and save in the memory. and send the GPRMC Data to the server.if the data can't send it to the server by other excuse like GSM Signal or Bad Internet, the data will save it automatically, and when the internet is ok, the unit will send the data again,and the state is AUTOLOW. when users set the numberof data is 0, the unti will close this function,and the unit will send message to the sender what is "GPRS SAMPLING 2 STOP"

Attention :

1. this function is not effect by open or close the unit until the unit receive the new command .

2. The bland area only can save 300PCS Data, the new data will recovery the old data if above 300PCS Data.

3. Upload the data is limited by Move Sensor, if the Move Sensor is open, and the unit will stop send data in this state, please see the detail specification of Move Sensor.

After you complete the three steps, then you can track your car in the platform.

The Advanced Application and Configuration of GPRS Mode

1.Change the telephone number in advance instructions

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When TLT-2H tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

2. Change the user password of TLT-2H

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When TLT-2H tracker receives the SMS and confirm the user password correctly;

changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

3 GPS State Configuration instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

3.1 Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

3.2 Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

3.3 Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

4.Single localization request instruction

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

BS: 27971054”

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

eg: ERROR GPS GPRMC FRAME DATA

5. Change The GPRS User Name

Format: #801#user password#new user name##

eg：#801#0000# username##

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, changes the user name to the new user name. After the success, it will send the confirmation messages to the sender. The content is “CHANGE USERNAME OK”.

6 Change The Service Password

Format：#802#user password#new service password#old service password ##

eg：#802#0000#1111#0000##

Explanation: When TLT-2H tracker receives the instruction, confirms the user password and old service password correctly, changes the service password to the new service password. After the success, it will send the confirmation messages to the sender. The content is “CHANGE PASSWORD OK”

7．Upload The Location Instruction At Once

Format：#806#user password##

eg：#806#0000##

Explanation: When TLT-2H tracker receives the instruction and confirms the user password correctly, sends the confirmation messages to the sender. The content is “START GPRS UPLOAD”. At the same time, send the data from the memory block to server.

Upload format:

#IMEI # user name #service password #condition

data quantity #the base station's information $ GPRMC…….. # the base station's information $ GPRMC…….

eg:

#123456789000001#TLT-2H#0000#SMS#3

#25ee0dff$GPRMC,083945.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083950.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083955.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E ##

Attention : Immediately upload data format for the state: SMS

8. Calling switch Instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When TLT-2H tracker receives the instruction to close calling and confirms the user password correctly, close the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When TLT-2H receives instruction to open calling and confirm the user password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: ON" to the sender.

9.Upload The Call

Explanation: One of 3 telephone numbers stored in advance calls in, hangs up after ringing 2-5 times. Dispose as 5.6，the state item automatically updates STATE: CALL.

10 Upload The Emergency Case

Explanation: When press the SOS key more than 3 seconds, it will do like 3.2.10 instruction, the information state item automatically updates STATE: SOS. At the same time, it will call the first preset user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn.

Note: If the calling state is off, it will not call the user telephone number, and only send messages to the server.

11. Alarm When Cut Off Power Function

1. Open command o: 011 + user password

eg: 0110000

2. Close command: 010+user password

eg: 0100000

Description: When the TLT-2H receive the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE ON", into the armament state after 10 seconds. When the main external power supply was illegally cut off, the TLT-2H will automatically send the current location information format as 4.1.6 to the 3 preset numbers, STATE items for: DEF. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn. When the TLT-2H receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF", repeal disarmament. TLT-2H is no longer monitor the illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the preset number.

12. Electronic Geo-Fence Function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the TLT-2H beyond the scope of the set fence, it will send location information as to 3.1.5 to the 3 preset numbers. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the TLT-2H re-enters the fenced area, it will immediately send location information format 3.1.5 to the three preset numbers. The information state item prompts STATE: RS. At the same time,

call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format2：004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z

eg：0040000E114.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format 3 : 005+User Password Rzzz.z

eg: 0050000R0.1

Note : When this unit receive this command and confirm the password is right. And read the Update gps data whether is available. If ok, take the lat/log to the coordination, and the R for The Radius, and also pen the Geofence at the same time. If the configuration is ok. The unit Will send "set geo fence ok " to the sender. If the update GPS Data void, the unit will give up and then red the next one, if the unit can't receive the data above 50sec, the unit will send A message to the sender which is "ERROR GPS DATA, TRY AGAIN LATER"

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

2) open the electronic fence: 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

3) close the electronic fence: 210 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

Attention : User can choose one of three way to set the Geo- fence . The unit will open this function after receive the command, the last operation is available when close this function then open it again.

13. Open the Electronic Fence:

Command : 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

14. Close the Electronic Fence:

Command : 210 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

15. Cut-Off Electricity And Oil Function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white (purple) wire will output low level in order to control the outside relay to cut off oil and electricity and back to confirm SMS: POWER OFF OK.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white (purple) wire will output high level in order to control the outside relay to recover oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

Attention: this function is certain risk, it's will happen traffic in the freeway if you send this command, so please consider again and again.

16. Overspeed Alarm Function

Format:#122#Password#X##
Eg: #122#0000#250##
Note : X is mean reference value, and the unit is mail/hours(KM/H), the area is
(0,999), when the unit receive this command and confirm the password is correct,
Then implement this command. X=250 is mean that when the speed of the car is
Above 250KM/H, the unit will send a message to the threes users ,the format is like 4.1.6 and the state is "OVER SPEED". At this time, if the speed of the car is lower as 250KM/H, then the unit will send a message to the send which the state is "SAFE SPEED"
When you set the X==0, and at this time, the unit will close this function, when you set the X≠0,

open this function, and then send a message to the sender which is "SET RATE LIMIT:X"

17.Upload the history data

Record the history data:
If you want to use this function in SMS Mode, you need to change the mode in GPRS and set the IP, APN, the detail way you can see the manual.
1, configuration
Format : #807#user password #X##
Note: X is frequency, the area is (0,999), the unit is "second". When the unit receive this command and confirm the password is right. And set the history frequency is X. When the X=0, that's close the function. If X=30, that's mean that the unit will save the data every 30se, if the command is ok, then send "SET SAMPLEING OK" to the unit.

Attention :
1, the memory of every data is 100B, the unit can save about 5000PCS Data.
2, when the data is above 3000PCS Data, the new data will recovery the old data automatically.
3. If the Move Sensor is open already, and the car is always stop , the History Record will close automatically until the unit is wake.

Upload the history data
A: upload the history data of 24h
Format : #808#user password #24##
When the unit receive this command and confirm the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like 1.1 state is "STORAGE"
Read all of the history data
Format : #808#user password##
When the unit receive this command and confirm the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like 1.1 state is "STORAGE"

18. Low Voltage Warning

When the TLT-2H ’s working voltage lower than the configuration, the unit will read the GPS information, whether or not effective, immediately the unit will send the format as 4.1.6 location information to the three stored numbers, the information state item automatically updates STATE: LP. Send a total of three times, each time one minute interval.

19. ACC detect charge function

1) For Charge

Description: TLT-2H check the state of ACC of the power through the ACC Cable,so the ACC ON when the car is moving, and the power of the car will recharge to the unit. and the ACC Off when

the car is parking, and the power of the car will not recharge to the unit.

3) The On/Off Command for ACC State

Open Command of ACC State : 091+ Password

Eg :0910000

Close Command of ACC State : 090+ Password

Eg:0900000

Note: when TLT-2H receive the 091 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:ON". when ACC is ON/OFF，the TLT-2H will send the current position to the pre-saved numbers whether the GPS Data is avaible or valid, and the state will display “AUTO START/AUTO STOP”be the ACC State.

when TLT-2H receive the 090 command, and confirm the password is correct.TLT-2H will send a message to the sender what the content is "ACC STATE PROMPT:OFF". when ACC is ON/OFF，the TLT-2H will not send any message whatever the unit is GPRS Or SMS Mode .

Attention : the default is ON, and once the configuration is ok whatever the unit is ON/OFF, the unit will not change until receve the next command or reset command

20. ACC Checking and Alarm for Moving

Alarm Command for Moving :008+Password+Rzzz.z

Close Alarm Command for Moving : 009+Password

Note: when TLT-2H receive 008 command, and confirm the password is correct,put Rzzz.z for the radius of area. the zone of zzz.z is 【0.1～999.9】, the unit is KM. after configuration is ok, TLT-2H will send "SET MOVE RADIUS OK"to the sender.

After configuration of the alarm for moving is complete, if TLT-2H checking the ACC State is changed which from ACC ON to ACC OFF, after three minutes, the TLT-2H will take the current position for the coordiration point, the unit will open the defence(use the zzz.z) whether the GPS Data is Available or Valid .

when the ACC is OFF, if TLT-2H checking the car over the defence,in the SMS Mode, the TLT-2H will send a message to the pre-saved numbers what the state is "STATE:ACC OS" (the unit will send the current position to the server,the state is "ACC OS",and call the pre-saved numers, the 150/151 comamnd will affect the unit that whether call the pre-saved numbers. if you reset the unit, the unit will only send message and don't call numbers) ,once the car coming the defence, the unit will send current position information to the server or send message and call the pre-saved numbers, and the state is "ACC RS"

Once TLT-2H checking the ACC state is close(from Open to Close), the Alarm for Moving will

close automatically, when the ACC state is open(from Close to open), the Alarm for Moving will open automatically

When TLT-2H receive 009 Command and confirm the password is correct, the Alarm for Moving is closed automatically whatever ACC State is open or close unless send 008 command again. after you set 009 command, the utni will send "MOVE DEFENGCE:OFF" to the sender.

Attention : the Alarm for Moving of default is open, and the area is 500M

21. Updata on the Air

1). Formate : !-Password

Eg: !-0000

Note: when TLT-2H receive this command and confirm the password is correct, the unit will restart and enter FTP Server to download procedure automatically.after succesful, the unit will restart again, and it's ok.

2) Formate : !-Password,FTP Address, User Name, Password

Eg: !-0000, igarin.gicp.net,auto,123

Note: when TLT-2H receive this command and confirm the password is correct, the unit will restart and enter FTP Server to download procedure automatically.after succesful, the unit will restart again, and it's ok.

Attention : the area of FTP Address is 【5，35】, and also can use domain, and made is for characters,numbers,. _（_） (-）. the user name is for FTP, the area is 【3，20】, the password is FTP'S password, the area is 【3，20】.